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ABSTRACT

A study investigated the relationship between phonological features in the oral reading of black West Indians and their reading comprehension. Subjects were 54 college students at the College of the Virgin Islands, St. Thomas. Each subject was recorded reading two passages and completed two cloze tests. The tapes then were analyzed for nine features of phonology. Bivariate correlations were computed to assess the relationship between each feature and reading comprehension. The results indicated no relationship between reading comprehension and phonological features related to pronunciation alone. However, significant positive relationships were found between features associated with verb tense and plural forms. The findings suggest that there is a relationship between a reader retaining "ed" endings when related to tense and retaining "s" endings when related to plurals and higher reading comprehension. (Author/FL)

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The Relationship between Phonological Features in Oral Reading and Reading Comprehension of Black West Indians

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The purpose of this study was to investigate the relationship between phonological features in oral reading and reading comprehension as measured by the cloze procedure. Subjects were 54 Black West Indian college students at the College of the Virgin Islands, St. Thomas, USVI. Each subject was recorded reading two passages. The tapes were analyzed for nine features of phonology. Bivariate correlations were computed to assess the relationships between each phonological feature and reading comprehension. Results indicated two positive and significant relationships with phonological features related to tense and plurals. Implications of the findings and suggestions for future research are discussed.

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The Relationship between Phonological Features in Oral Reading and Reading Comprehension of Black West Indians

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During the conduct of a related study (Karlin, 1980), Dr. Gilbert Sprauve (1974), an expert West Indian linguist, suggested to the writers that certain phonological patterns of West Indian speech may have important implications in assessing reading comprehension. Questions have been raised regarding the relationship between non-standard English and reading difficulties. The purpose of this study was to investigate the relationship between phonological features in oral reading and reading comprehension as measured by the cloze procedure of 54 Black West Indian College students at the College of the Virgin Islands, St. Thomas, USVI. Contemporary research on this issue has failed to adequately describe this relationship but has indicated the importance of it to the field.

Initially, Goodman (1969) hypothesized that "the more divergence there is between the dialect of the learner and the dialect of the learning, the more difficult will be the task of learning to read" (p. 14-15). Miller (1973) has suggested that teachers cannot be sure to what extent speakers of dialects other than standard English, particularly young ones, comprehend standard English. Cazden (1970) indicated that "all children acquire language but...many, especially lower class black children, acquire a dialect of English so different in structural feature that communication in schools, both oral and written is seriously impaired by that fact alone" (p.36). Johnson (1969) suggested that when a child who speaks black English is faced with tasks of learning to read standard English, there is interference between the unfamiliar sounds and structures he is trying to master. This interference may, in fact, explain why many black children are failing to achieve adequately in reading (Baratz, 1969; Fasold and Wolfam, 1970; Labov, 1964, 1967; Shuy, 1966-67; Stewart, 1964; Wolfam and Fasold, 1969). Three studies that examined the performance of black low socioeconomic status children on oral reading tasks in standard English (Ames, Rosen and Oslon, 1971; Brown, 1968; Rosen and Amers, 1972) have indicated evidence of dialect interference. But, because of methodological problems, results must be interpretted with caution (Harber and Bryen, 1976).

Other researchers,however, have conducted studies which do not support this view. Hockman (1973), Marwit and Newmann (1974), and Simons and Johnson (1974) conducted studies in which subjects took reading tests in standard English and black dialect. Data from these studies tend to reject the hypothesis that materials written in standard English are the cause of reading problems. In all three studies, subjects did not comprehend dialect materials better than standard English, and in Marwit and Newmann's study, the second grade black subjects comprehended the standard English materials better than materials written in

nonstandard English. Hall and Turner (1974) supported the same conclusion after reviewing the research: "In general, no acceptable, replicated research has found that the dialect spoken by black children presents them with unique problems in comprehending SE (standard English)..."(p.79). Rupley and Robeck (1978) summarized research on the relationship between black dialect and reading performance and stated that support is lacking for the conclusion that black dialect interference is a major contributor to black children's reading difficulties.

A relationship between language and reading proposed by Mattingly and Kavanaugh (1973) stated that the relationship depends on a distinction between primary linguistic activities itself and the speaker-hearer's awareness of this activity. Primary linguistic activity consists of the processes of producing, perceiving, understanding, rehearsing or recalling speech. Many investigators have come to think that these processes are essentially similar since they all require the construction or reconstruction of utterances in both phonetic and semantic form (Neisser, 1967). The speaker-hearer, having synthesized some utterance, is conscious not only of a semantic experience (understanding the utterance) and perhaps an acoustic experience (hearing the speaker's voice) but also of experience with certain intermediate linguistic processes. He has not only synthesized a particular utterance, but he is also aware of having done so and can reflect on this experience as he would with other experiences (Mattingly and Kavanaugh, 1973). The data on reading interference attributable to phonological characteristics of the Black English vernacular are by no means clear. The different syntax of the black vernacular could interfere with reading (especially with comprehension) in two ways: interference could arise when a standard English sentence is interpretted as a nonequivalent sentence in the vernacular, or when a speaker of the vernacular has to translate his own speech into standard English (Miller, 1973). This interference could be intensive enough to cause reading comprehension problems (Stewart, 1969). Most research suffers from some methodological flaw so the question of phonological interference in reading must remain open until further research can be conducted (Miller, 1973).

Studies examining listening comprehension of black children on both standard English and or black English have produced contradictory results (Frentz, 1971; Hall, Turner and Russell, 1973). Additionally, problems were evidenced in many of the studies that limit the generalization of results and restrict comparability between studies.

Speakers of nonstandard English as a group score significantly below the achievement levels of speakers of standard English, all things being equal (Cohen, 1969; Coleman, Campbell, Hobson, McPartland, Modd, Weinfeld and York, 1966; Burling , 1973). No one has been able to adequately demonstrate that factors other than nonstandard English account for this condition. No studies have been conducted with college or adult aged readers who are speakers of nonstandard English.

Harber and Bryen (1976), noting support for the interference hypothesis in studies exploring performance of black subjects using oral reading tasks presented in Standard English, indicated that this result would

be expected since the interference of the primary system on the second language is most observable during this behavior. However, they caution that this interference may be restricted to superficial features of pronunciation and that "The important question is whether dialect interference, which appears to operate when Black English speaking children orally read Standard English, negatively affects these children's comprehension of the materials they read in Standard English" (p.395). This important relationship between phonological features in oral reading and reading comprehension was explored in the present study.

Prior to inclusion in the study, students were given a word recognition test of words from the two reading passages they would later be asked to read orally to ensure that no one in the sample was unable to understand the passages due to inability to recognize words. Additional criteria for inclusion were: (1) residents of the U. S. Virgin Islands for at least 7 consecutive years, (2) English as a first language, and (3) Black West Indians. Fifty-four students at the College of the Virgin Islands were randomly selected from a pool of students meeting all the above criteria.

All subjects read the two passages (Appendix A) orally into a cassette tape player and took two cloze tests. The cloze tests were prepared using extablished methods (Potter, 1968). Upon analyzing the oral readings of the subjects, distinct patterns in the pronunciation of certain consonants or consonant combinations became apparent. Table 1 describes the phonological patterns selected for study and the number of observations for each.

TABLE 1

Phonological Patterns

Variable	Variable Description	N
#1	beginning th pronounced as d Example: the pronounced as de	50
#2	beginning th pronounced as t Example: thought pronounced as taught	8
#3	final th pronounced as t Example: with pronounced as wit	6
#4	final ed dropped Example: remembered pronounced remember	15
#5	final st pronounced as s Example: least pronounced lease	16
#6	final ing pronounced as in Example: longing pronounced as longin	5
#7	final nd pronounced as n Example: attend pronounced as atten	13
#8	final nt pronounced as n Example: important pronounced importan	6
#9	final s (making word plural) dropped Example: years pronounced as year	55

Table 2 provides descriptive statistics on subject performance for each of the phonological features selected for study. Variable 10 represents the total correct score of the two cloze tests. All variables have the same number assignments as given in Table 1. The scoring for all phonological variables was keyed so that a score was incremented by one for each standard English as opposed to West Indian pronunciation.

TABLE 2

Selected Descriptive Statistics
for
Phonological Features Study

Variable	Mean	Variance	Standard Error
#1	40.59	57.60	1.03
#2	5.98	4.47	.29
#3	3.02	4.92	.30
#4	14.19	1.47	.17
#5	12.07	9.01	.41
#6	4.81	.27	.07
#7	6.46	15.84	.54
#8	5.67	.26	.07
#9	53.48	7.65	.38
#10	46.24	81.02	1.22

The null hypotheses stated that there is no significant relationship between reading comprehension and the use of any of the phonological features described above. Table 3 reports the bivariate correlations (r) and the variance shared (r^2) for each of the phonological features with reading comprehension.

The results of the study consistently indicated no relationship between reading comprehension and phonological variables related to pronunciation alone. However, variables associated with tense (#4) and plurals (#9) resulted in significant positive relationships beyond the set alpha level ($p \leq .05$). Variables #4 and #9 shared 10% and 9% of their variance respectively with reading comprehension.

TABLE 3

Correlations of Phonological Features with Reading Comprehension

Variable #	r	r^2
1	.24	.06
2	.06	.00
3	.08	.00
4	.31*	.10
5	.25	.06
6	.05	.00
7	.23	.05
8	.00	.00
9	.30*	.09

* denotes correlations significant beyond $p \leq .05$ level

The interpretation of the significant correlations would indicate that there is a relationship between a reader retaining ed endings when related to tense and retaining s endings when related to plurals and higher reading comprehension scores.

The results of this study have demonstrated dialect interference that negatively effects reading comprehension. Two additional factors should be considered in the exposition of the study's results: (1) the age and reading level of the sample, and (2) the possibility of unnatural subject behavior during the experiment. As Baratz (1970) has previously noted, interference in oral reading performance is probably much greater than the research has indicated since those tested in oral reading have attained a degree of proficiency that would exclude nonreaders. Secondly, in an experimental setting, when a subject is asked to orally read Standard English into a tape recorder, one must consider the possibility of the reading performance being an artifact of the experiment. Indeed, two subjects were eliminated from the current study for this reason. The effect of the above factors is to render the results conservative. It would be much more likely to demonstrate dialect interference with much younger subjects that have not overcome, at least to a degree, the interference caused by the divergence in language. It would also seem more likely to discover evidence of interference with subjects that were not so clearly in an experimental setting.

Further research is recommended to more fully describe the effect of language interference on reading comprehension. As Harber and Bryen (1976) stated, it is necessary to determine the nature of this relationship prior to the development and implementation of educational strategies. Research with a younger group where interference would be more apparent is especially suggested.

APPENDIX A

Oral Reading Passage 1

Ambitious men and women always feel at least a faint longing to stand out in the stream of history. This year, you as a group and as individuals have a particular opportunity to be remembered by future generations. For you are the first freshman class to enter this university since it became a state university.

If I were to ask each of you why you wish to attend a university, I would get a long list of interesting answers. I trust that each of you has thought about this matter seriously for a university career is serious business. I don't mean that you should be grim about it. It can be, and usually is, a most enjoyable experience--it should and can be the most stimulating period of your life. Why? Because all the reasons which might be given for attending a university can be summed up in one word--opportunity.

You will have the opportunity to partially quench your thirst for knowledge. (I hope the thirst is never completely quenched.) You will have the opportunity to achieve academic excellence, or to pave the way for distinguished careers in the sciences, in the humanities, in the professions. If you participate in extracurricular activities (never overdoing it, of course) you will learn a great deal about people and how to live successfully with the human race. This can be very important. Perhaps you can excel in some branch of athletics--fine. I heartily recommend vigorous and determined participation.

After you graduate (and I trust most of you will) you will, on the average, have fifty years of life ahead of you. May members of the faculty and administration be successful in helping you to prepare in such a way that those fifty years will be happy, stimulating, and fruitful ones. But we can only help. The burden of accomplishment is up to each of you--individually..

Oral Reading Passage 2

Who can oppose human rights? Most Americans rank them with God, Mother, and Country. What we will do about them is another matter. The gap between preaching and practice may leave both human rights and Jimmy Carter the losers.

Why are Americans solid in the general support for human rights, but so soft on specifics? And what does that mean?

First, few Americans know the scope of the President's program. The Administration has not made sufficiently clear that its policy embraces all rights proclaimed in the United Nations Universal Declaration of Human Rights. That means not just condemning torture or protecting free speech but trying to meet such "basic human needs" as food, shelter, and health care at home, as well as abroad.

Second, few think promoting human rights requires more than statements.

APPENDIX A
(continued)

The Administration is loath to stress the link between words, which can be cheap, and deeds, which are not. The economic pressure needed to impress a dictator can mean lost business and jobs for Americans. Serious United States focus on basic human needs might mean big tax hikes to finance more foreign aid and/or domestic welfare. Such programs suggest a substantial redistribution of income within and away from the United States.

Third, even fewer Americans--hard-pressed by inflation, opposed to higher taxes, and prone to a new political conservatism--welcome such price tags on their principles.

United States reaction to Cambodia may be the most telling index to this trend. Although the United States could not prevent the genocide of an estimated one million Cambodians; it has done little for those it could help; the thousands who risked death to escape. Many Americans are all for human rights--until Indochinese refugees compete for scarce United States jobs.

Reading Passage 1

Furnas, C.C.,Dr. CC. Greeting to Students. The Spectrum, New York: S.U.N.Y. at Buffalo, (September 5, 1962).

Reading Passage 2

Vogelgesang,S., Principles Price. The New York Times, June 28, 1978, p. A23.

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